COLNATEC

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Basic Design with Same Degree of Excellence

Designed with the same level of dependability and precision of Eon™ system, the EonLT™ PC-based film thickness monitor provides a basic feature-set for users who do not require process or temperature control. The EonLT™ offers the same innovative monitoring capability of the Eon™, yet the technology has been streamlined to provide a more compact, low-cost unit. Like the Eon™, the Eon-LT™ is a temperature measuring film thickness monitor which surpasses conventional monitors that are blind to thermal changes of the crystal. The combination of frequency and temperature measurement allows unprecedented accuracy in real-time rate and thickness monitoring.

Why measure temperature?

The frequency change of a crystal by process heating can easily be equal to the frequency change caused by coating. In normal operation there is a built-in 10% error in most rate measurements. In the worst case, the error rate can reach 100% - calling into question the entire purpose of the measurement process. While Eon-LT™ is compatible with industry standard crystal sensors, the unit was also specifically created to be paired with Colnatec's Phoenix™ in combination with AT™, HT™, RC™, or SuperQuartz (SQ™) 6 MHz crystals for achieving a degree of precision never before imagined in the world of thin film

Eon-LT™ PC-Based Monitor
Film Thickness Monitor with Temperature Measurement

Features

- Temperature measuring quartz oscillator

- Communicates with latest, intuitive Eon™ software

- Real time graphing of temperature and frequency alongside corresponding rate and thickness values

- Shutter on/off support (relays)

- Widely expandable systems - up to 255 Eon-LTs™ can be networked

- All connecting cables, software, and instruction manual included

Specifications

- Drives crystals 1-10 MHz, 1-200 Ω, any type (Quartz, SuperQuartz™)

- Two type K thermocouple input; accurate to +/-0.25°C

- Two high resolution sensor head input accurate up to .001 Hz

- 24 volt power (supplied)

- Industry Standard RS232 communication protocol

- 4.5" X 2.5" X 1"

- Two user-selectable relays

- Two status LEDs

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Specifications

Measurement	
Frequency Resolution	0.001 HZ @ 6 MHz (1 Sample per Second)
Sample Rate	0.5 Hz to 100 Hz
Display Update Rate	0.5 Hz to 100 Hz (Depending on sampling rate)
Sensor Crystal Frequency	5,6,7,8,9,10 MHz
Standard Hardware	
Sensor	2 BNC Connections (External Oscillator Required)
Temperature	2 type K TC
Sources	2 0-5 VDC source controls
Relays (non-programmable)	2 SPST NO for abort & thickness set-point
Input (programmable)	8 isolated 5V inputs
Output (programmable)	8 5A SPST relays
Remote Power	Front panel FOB connector for manual power control
Expandable sensor card (1 incl., expandable to 2)	2 sensors, 2 sources, 2 relays, 2 Type K TC
Expandable I/O card (1 incl., expandable to 2)	Input: 8 isolated 5 VDC inputs
	Output: 8 5A SPST relays
Input setup	Inputs can trigger events depending on user selected conditions
Output Setup	Outputs can be triggered depending on user selected conditions
DAC Recorder	Either or both source outputs can be used as recorder outputs
Parameters	User scalable 0-5V output for rate and thickness

Dimensions	
Length	4" to 30" depending on customer requirements
Cross Section	Able to be passed through a 2.75" ConFlat port
Ordering Information	
Phoenix™	Standard sensor with embedded thermocouple